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PCT

IAP7 Rec'd PCT/PTO 13 JUN 2006

Docket No. 4439-4036

17224 U.S. PTO
061306

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Masataka Kuwana and Hiroaki Kodama
Group Art 1645
Serial No.: 10/549,707
Examiner: TBA
Filed: September 15, 2005
For: MONOCYTE-ORIGIN MULTIPOTENT CELL MOMC

EXPRESS MAIL CERTIFICATE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Express Mail Label No.: EV 826869705 US

Date of Deposit: June 13, 2006


I hereby certify that the following attached paper(s) and/or fee

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2. Copy of Forms PCT/IB/338 and PCT/ISA/237 (5 pages)
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Michael A. Willis

(Typed or printed name of person mailing paper(s) and/or fee)



(Signature of person mailing paper(s) and/or fee)

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Group Art Unit: 1645
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Filed: September 15, 2005
For: MONOCYTE-ORIGIN MULTIPOTENT CELL MOMC

TRANSMITTAL OF FORM PCT/IB/338

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

- ☒ Transmitted herewith is/are the following items in the above-identified application:
Form PCT/IB/338 and Form PCT/ISA/237. The reference cited in Form PCT/ISA/237
was previously cited in the IDS of September 15, 2005.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be
required by this paper, or credit any overpayment to Deposit Account No. **13-4500**, Order
No. **4439-4036**. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

Dated: June 13, 2006

By: Michael Willis

Michael Willis
Registration No. 53,913

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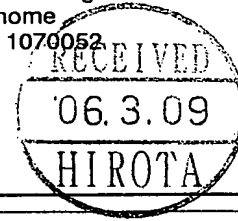
From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

HIROTA, Masanori
3F, Wakabayashi Building
8-5, Akasaka 2-chome
Minato-ku, Tokyo 107-0052
JAPON



Date of mailing (day/month/year)
02 March 2006 (02.03.2006)

Applicant's or agent's file reference
P10000448

IMPORTANT NOTIFICATION

International application No.
PCT/JP2004/003680

International filing date (day/month/year)
18 March 2004 (18.03.2004)

Applicant

KEIO UNIVERSITY et al

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Masashi Honda

Facsimile No.+41 22 740 14 35

Facsimile No.+41 22 338 70 10

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/003680

Box No. I

Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/003680

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 19-20

because:

☒ the said international application, or the said claims Nos. 19-20
relate to the following subject matter which does not require an international preliminary examination (*specify*):

The inventions described in claims 19-20 are inventions relating to a treatment method of the human body by surgery or therapy, which does not require an international preliminary examination.

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 19-20

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/003680

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
	Novelty (N)	Claims 1-8, 11, 14-18	YES
		Claims 9-10, 12-13	NO
	Inventive step (IS)	Claims	YES
		Claims 1-18	NO
	Industrial applicability (IA)	Claims 1-18	YES
		Claims	NO
2. Citations and explanations:			
	Document 1: Proc Natl Acad Sci USA, 2003 Mar 4, Vol. 100, No.5, pp. 2426-2431		
	<u>Claims 1 to 8, 11, 14 to 18</u>		
	The inventions of claims 1 to 8, 11 and 14 to 18 do not appear to be novel over document 1 cited in the ISR.		
	Document 1 describes culturing peripheral blood monocyte-origin cells, and obtaining multipotential stem cells that express CD14, CD34, and CD45, and describes the differentiation of said stem cells into vascular endothelial cells, nerve cells, T lymphocytes, epithelial cells, hepatic cells, etc.		
	Therefore, the inventions of claims 1 to 8, 11 and 14 to 18 are not substantially different from the invention of document 1.		
	<u>Claims 9 and 10</u>		
	The inventions of claims 9 and 10 do not appear to involve an inventive step over document 1 cited in the ISR.		
	Culturing using a fibronectin coated culture substrate when culturing cells, is often performed by a person skilled in the art of the relevant technical field; thus in the invention of document 1, no remarkable difficulty can be found in culturing on fibronectin when culturing peripheral blood monocyte cells.		
	Further, utilization of the constitutions of the inventions of claims 9 and 10 is not found to have particularly exceptional effects.		
	<u>Claims 12 and 13</u>		
	The inventions of claims 12 and 13 do not appear to involve an inventive step over document 1 cited in the ISR.		
	The differentiation of some multipotential stem cells into desired cells in the presence of various publicly known differentiation related factors is technology well-known to persons skilled in the art of the relevant technical field.		
	Further, utilization of the constitutions of the inventions of claims 12 and 13 is not found to have particularly exceptional effects.		